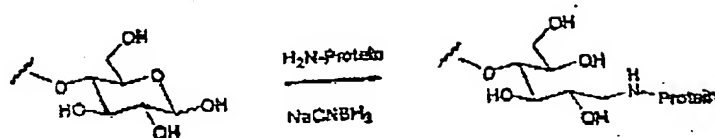
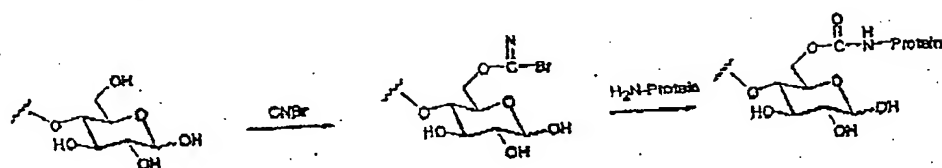


Fig. 1: Neoglycoprotein synthesis

## a) Reductive amination

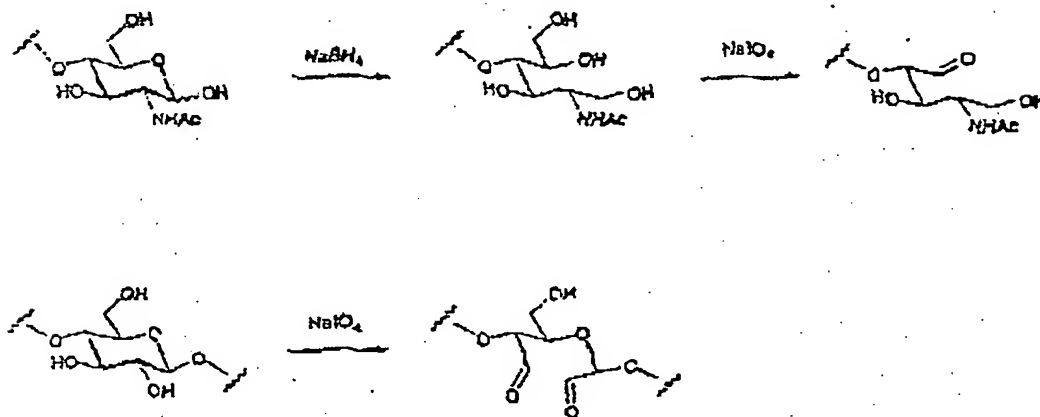
5 b) I<sub>2</sub> oxidation

## c) CNBr activation



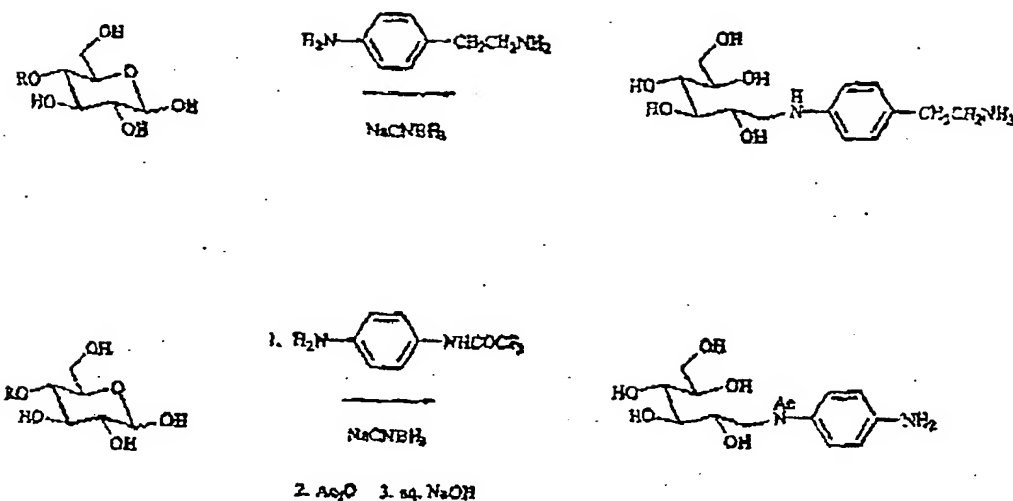
Alternative: activation with CDAP

10

d) NaIO<sub>4</sub> cleavage

15 Fig. 2.1: Polysaccharide modification

## a) Reductive amination



## 5 b) N-glycosylation

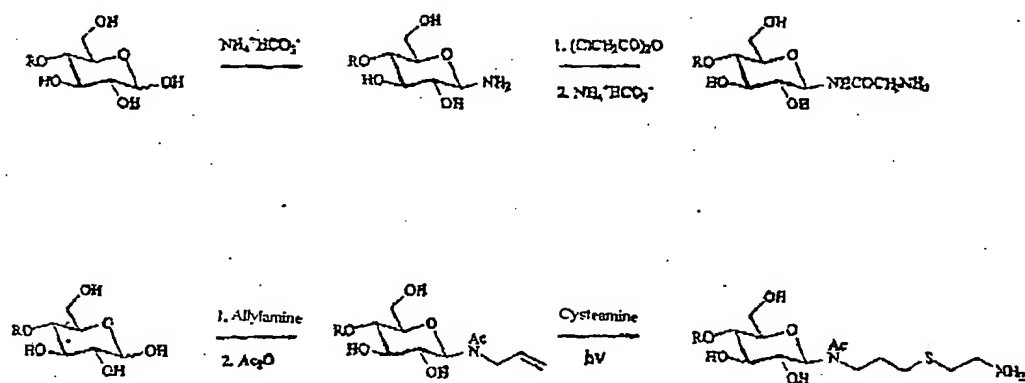
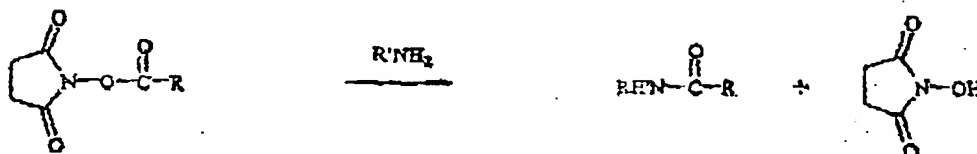


Fig. 2.2: Oligosaccharide modification

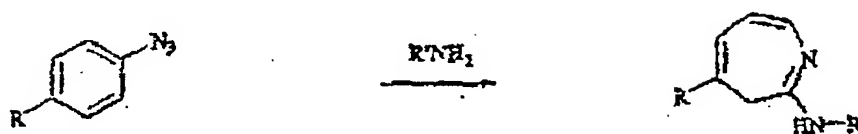
## 1a: N-Hydroxysuccinimides



## 5 1b: Imido esters

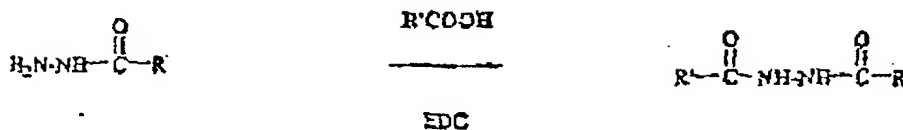
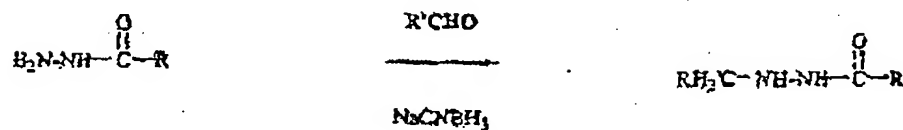


## 1c: Aryl azides

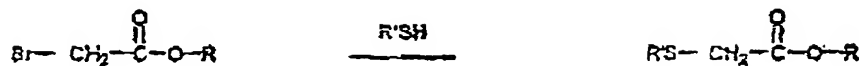


10

## 2: Hydrazides

Fig. 3: NH<sub>2</sub> and CHO/COOH coupling reactions

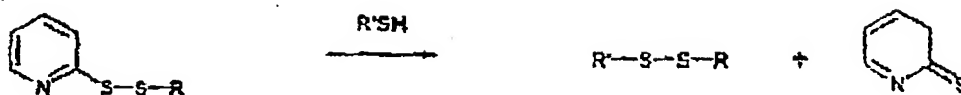
## 3a: Haloacetates



## 5 3b: Maleimides



## 3c: Pyridyl disulfides

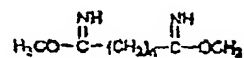


10

Fig. 3: SH coupling reactions

## 1: Homobifunctional

a)

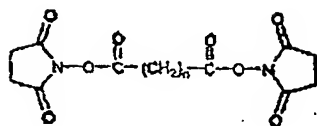


DMA (n = 4)

DMP (n = 5)

DMS (n = 6)

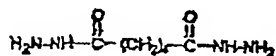
b)



DSG (n = 3)

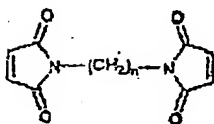
DSS (n = 6)

c)



ADH

d)



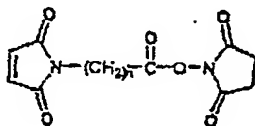
BMCE (n = 2)

BMB (n = 4)

BMH (n = 6)

## 2: Heterobifunctional

a)

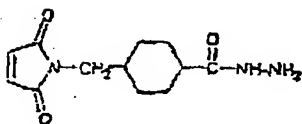


AMAS (n = 1)

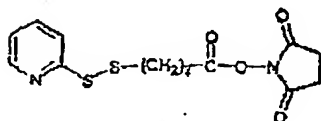
GMBS (n = 3)

EMCS (n = 5)

b)

M<sub>2</sub>C<sub>2</sub>H

c)

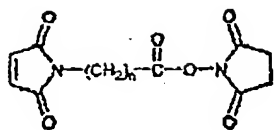


SPDP

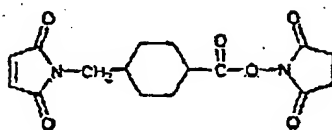
Fig. 4: Crosslinkers

## 1: Maleimide

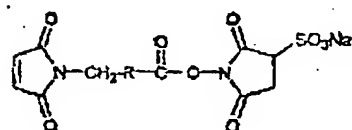
a)



AMAS ( $n = 1$ )  
 GMBS ( $n = 3$ )  
 EMCS ( $n = 5$ )

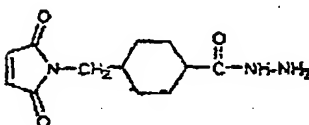


SMCC

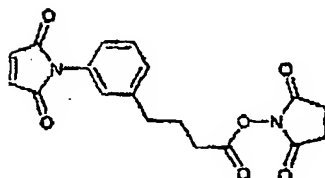


Sulfo-GMBS  
 Sulfo-EMCS  
 Sulfo-SMCC

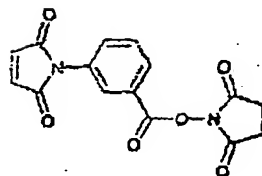
b)

 $M_2C_2H$ 

c)



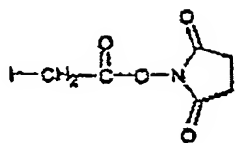
SMPB



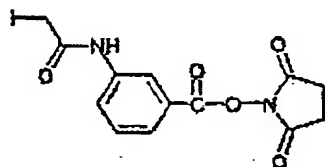
MBS

5 Fig. 5: Linkers for SH couplings

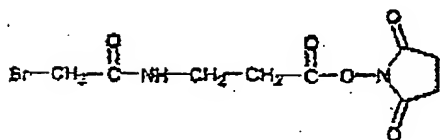
## 2: Haloacetate



SIA

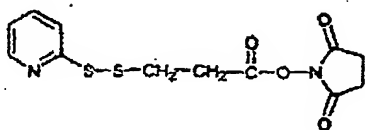


SIAB

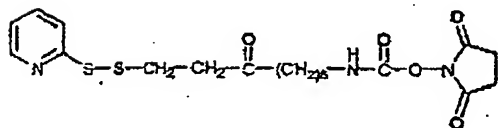


SBAP

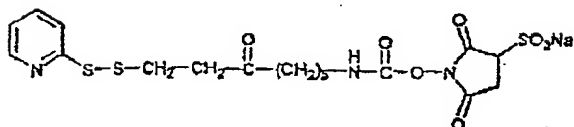
## 5 3: Pyridyl disulfide



SPDP



LC-SPDP



Sulfonate-LC-SPDP

Fig. 5: Linkers for SH couplings